

NORTHWEST SOIL CEMENT LLC

SOIL AMENDMENT - SPECIALITY CONSTRUCTION - WATER QUALITY

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WATER QUALITY SERVICES

PARTS and PIPE LIST

5/30/2012

SITE: **Avery Landing Site, EQM**

TYPE:

4" Dewatering Pump and 6" Conveyance Line to Weir Tank

ITEM/ PART	QUANTITY	PRICE	EXTENTION
4" submersible pump (5 HP w/ Float switch and 100' of cord)	1		
4" x 20' cam loc Discharge Hose	2		
4" Fem Cam x 6" Vic Adapter	1		
6" x 30' Alumn Vic Pipe	34		
6" Vic 90 Bend	4		
6" Vic 45 Bend	4		
6" Vic Couplers	44		
6" Vic Flow Meter (set between last to sticks of pipe)	1		
6" Vic x 4" Male Cam loc Adapter	1		
4" Com-loc Hand Valve	1		
4" x 10' Cam loc Hose	2		
4" 90 Elb (on tank fill line)	1		
4" MIP x F/Cam (on tank fill line)	1		
(tank has 4" connection)			
RECTOR SEAL (quarts)	1		
PVC PRIMER (Qt.)	3		
PVC 721 GLUE (Qt.)	6		

6" From Weir to Pre-Treatment Tanks

ITEM/ PART	QUANTITY	PRICE	EXTENTION
OUT OF WEIR TO OIL/WATER			
8" Flange x 6" Flange	1		
6" Vanstone	1		
6" Flange Bolt Kit w/ gasket	1		
6" PVC 90 (rotate to hit oil/water manifold)	1		
6" PVC	10		
6" PVC 90	1		
6" PVC (suspend off tank w/ rope)	30		
6" PVC TEE	2		

6" PVC 90	1
6" x 4" PVC Bushing	3
4" PVC (three pieces feeding oil/water separators)	15
4" Vanstone	3
4" Flange Bolt Kit w/ gasket	3

OUT OF OIL/WATER TO BOOSTER PUMP

4" Vanstone	3	
4" Flange Bolt Kit W/ gasket	3	
4" PVC 90 Sch 80	4	
4" PVC TEE Sch 80	2	
4" PVC Bushing Sch 80	6	
4" PVC Sch 80 (three pieces leaving oil/water separators)	35	+10'
4" PVC Sch 80 Slip x FIP Adapt	1	
4" M/Cam x MIP Adapt	1	
4" x 10' Cam Hose	1	
4" Flow sensor and Injection Point (mounted on a board)	1	
4" x 10' Cam loc Hose	1	
DV 80/ 100 Booster Pump	1	

BOOSTER PUMP TO PRE-TREATMENT TANK #1

(from DV 80/ 100 pump)	3	
4"x 20' Cam loc hose	1	
4" FLOW METER w/ Male and Fem Cam loc	1	
4"x 10' Cam loc hose	1	
4" Butterfly Valve Gear Operate (for flow control)	1	
4" Vanstone	1	+1

4" Flange Bolt Kit w/ LONG BOLTS	1
4" PVC SCH 80	70
4" PVC 90 (around and up into tank)	4
4" PVC TEE (Flow diffuser into tank)	1

2" PVC OIL COLLECTION LINES

2" PVC FIP x SLIP	3
2" PVC 90	5
2" PVC TEE	2
2" PVC	60
2" PVC 90	1
2" PVC SLIP x FIP	1
2" MIP x Male Cam loc adapter	1
2" Cam loc Hose (short, into the oil storage totes)	1

MISC. PARTS AND PIECES

1/2 OD Poly Injection line from H2O Quality Box	100
Extension cord from flow switch to LMI in H2O Quality Box	100

Three Tank Pre-Treatment System

ITEM/ PART	QUANTY	PRICE	EXTENTION
TANK #1 w/ INTERNAL SKIMMER to #2 BACK DOOR			
8" PVC (vertical riser in #1)	5		
8" PVC 90 (vert)	1		
8" Vanstone	1		
8" Flange bolt kit w/ gasket	1		
12" Flange Adapter x 8" Flange Adapt	1		
12" Flange bolt kit w/ gasket	1		
Alumn Door Cover w/ 12" flange in and out (seal w/ silicone during bolt up)	1		
12" Flange bolt kit w/ gasket	1		
12" Flange Adapter with 8" FIP	1		
8" MIP x SLIP Adapter	1		
8" PVC	2		
8" PVC 90	1		
8" PVC	20		
add pipe support on this run			
8" PVC 90	1		
8" PVC	2		
8" Vanstone	1		
8" Flange bolt kit w/ gasket	1		
12" Flange Adapter x 8" Flange Adapt	1		
12" Flange bolt kit w/ gasket	1		
Alumn Door Cover w/ 12" flange in and out (seal w/ silicone during bolt up)	1		
12" Flange bolt kit w/ gasket	1		
12" Flange Adapter x 8" Flange Adapt	1		
8" Vanstone	1		
8" PVC TEE (flow diffuser)	5		
TANK #2 DOOR UNDER STAIRS to #3 LOW SIDE DOOR			
Alumn Door Cover w/ 12" flange in and out (seal w/ silicone during bolt up)	1		
12" Flange bolt kit w/ gasket	1		
12" Flange Adapter x 8" Flange Adapt	1		
8" Vanstone x	1		
8" Flange bolt kit w/ gasket	1		
8" PVC	2		
8" PVC 90	1		
8" PVC	20		
add pipe support on this run			
8" PVC 90	1		
8" PVC	20		
add pipe support on this run			

8" PVC 90	1
8" PVC	2
8" MIP x SLIP Adapter	1
8" MIP x SLIP Adapter	1
12" Flange bolt kit w/ gasket	1
Alumn Door Cover w/ 12" flange in and out (seal w/ silicone during bolt up)	1

4" Pump Line from Pre-Treat Tank to H2O Control Box

ITEM/ PART	QUANTITY	PRICE	EXTENTION
30 HP Submersible Pump	1		
Suspend pump with come-a-long and chain for adjustment	1		
6"x 10' Bauer hose	2		
6" bauer 90	2		
6"x 10' Bauer hose	4		
6" Butterfly Valve Gear Operated Bauer in and out (flow control)	1		
6"x 10' Bauer hose	2		
6" bauer 90	2		
6" Fem Bauer x Flange Adapter	1		
6" Flange bolt kit w/ gasket	1		

4" Out of H2O Box to Filter and Return to Box

ITEM/ PART	QUANTITY	PRICE	EXTENTION
6" VANSTONE	1		
6" Flange bolt kit w/ gasket	1		
6" x 4" PVC Bushing	1		
4" PVC 45	2		
4" PVC	15		
4" PVC 90	1		
4" PVC	10		
4" PVC 90	1		
4" PVC	30		
4" PVC 90	1		
4" PVC	3		
4" PVC 90	1		
6" x 4" PVC Bushing	1		
6" Vanstone	1		
6" Flange bolt kit w/ gasket	1		
SAND FILTER			
6" Vanstone	1		
6" Flange bolt kit w/ gasket	1		
6" x 4" PVC Bushing	1		
4" PVC	5		
4" PVC 90	1		
4" PVC	7		

4" PVC 90	1
4" PVC	10
4" PVC 90	1
4" PVC 45	2
6" x 4" PVC Bushing	1
6" Vanstone	1
6" Flange bolt kit w/ gasket	1

6" Combined Recycle Lines Out of H2O Box and Back to Tank #1

ITEM/ PART	QUANTITY	PRICE	EXTENTION
6" VANSTONE	2		
6" Flange bolt kit w/ gasket	2		
6" x 4" PVC Bushing	2		
4" PVC 45	2		
4" PVC 90	1		
4" PVC TEE	1		
4" PVC	10		
4" PVC 90	1		
4" PVC	10		
4" PVC TEE (for back flush connection)	1		
4" PVC	100		
4" PVC TEE (Post Carbon Recycle Connection)	1		
4" PVC 90 (Post Carbon Recycle Connection)	1		
4" PVC TEE (flow diffuser in tank)	1		
4" Vanstone	1		
4" Flange and bolt kit w/ gasket	1		
4" Butterfly valve w/ 4" F/Cam inlet x Flange outlet	1		

4" Filter Backflush Line Tied into Recycle Line

ITEM/ PART	QUANTITY	PRICE	EXTENTION
4" PVC FIP X SLIP ADAPTER (one or the other here)	1		
4" PVC MIP X SLIP ADAPTER	1		
4" PVC	5		
4" PVC 90 (point down)	1		
4" PVC	5		
4" PVC 90 (square into recycle line)	1		
4" PVC	10		

4" Out of H2O Box Through Bag Filters and Carbon Units

ITEM/ PART	QUANTITY	PRICE	EXTENTION
6" FLANGE x 4" M/Cam	1		
6" Flange bolt kit w/ gasket	1		
4" x 10' Cam hose	2		
4" 90 Elb Cam (Fem x Male)	3		
4" TEE Cam (FxmM)	1		

4" x 90 Elb cam (Fem x Male)	1
4" Flange x F/Cam (on bag filter inlet)	2
4" Flange bolt kit w/ gasket	1
4" x 10' Cam hose	2
BF 400 Bag Filters	2
4" Flange x M/Cam (on bag filter outlet)	2
4" x 10' Cam Hose	2
4" TEE Cam (FxFxM)	1
4" 90 Elb Cam (Fxm)	2
4" x 20' Cam loc hose (to top of Carbon #1)	1
Carbon Unit 1	1
Inlet	
4" Butterfly valve	1
4" Flange bolt kit w/ long bolts (no gasket)	2
4" Flange x F/Cam	1
4" 90 Elb Cam (Fxm)	1
Outlet	
4" Butterfly valve	1
4" Flange bolt kit w/ long bolts (no gasket)	2
4" Flange x F/Cam	1
4" 90 Elb Cam (Fxm)	1
4" x 10' Cam loc hose (to top of Carbon #2)	2
4" TEE Cam (Fxm3/4" Ball Valve-Test Port)	1
Carbon Unit 2	1
Inlet	
4" Butterfly valve	1
4" Flange bolt kit w/ long bolts (no gasket)	2
4" Flange x F/Cam	1
4" 90 Elb Cam (Fxm)	1
Outlet	
4" Butterfly valve	1
4" Flange bolt kit w/ long bolts (no gasket)	2
4" Flange x F/Cam	1
4" 90 Elb Cam (Fxm)	1
4" x 20' Cam loc hose (to top of Carbon #2)	1
4" Tee Cam (FxmM)	1
4" x 20' Cam loc hose (to valve and TEE in recycle line)	1
4" x 20' Cam loc hose (to storage tank manifold)	1

6" Storage System and Manifold and Discharge Line

ITEM/ PART	QUANTITY	PRICE	EXTENTION
HEADER PIPE INTO STORAGE TANKS			
4" Butterfly valve Cam (Fxm)	8		
4" TEE (FxFxm) - Set w/ GV for Optional Booster Pump Tie-in	2		
4" 90 Elb Cam (Fxm)	2		

4" x 20' Cam Hose	8
4" x 10' Cam Hose	8
4" TEE Cam (FxMxM)	1
6" x 4" Red (FIP x F/Cam)	2
4" TEE Cam (FXFXM)	8
90 Elb Cam (FxM)	8
4" Adapt F/Cam x M/Bauer	2
4" Adapt M/Cam x F/Bauer	2
4" TEE Cam (FxFxM)	1

(there is additional hose and tees being sent so vessel can be run in parallel)

HEADER PIPE OUT OF STORAGE TANKS

4" Adapt F/Cam x 6" M/Bauer	1
6" x 20' Bauer Pipe (out to river)	25
6" Bauer Flow meter	1
6" x 10' Bauer Hose (as needed)	4
6" Bauer 45 (two elbs used to set diffuser on river bank)	4
6" Bauer Tee FxMxM (Discharge Diffuser Tee)	1
6" Bauer 90 (Discharge Diffuser turned vert to displace flow))	2

SPARE PARTS, PIPE, and PIECES

Rope
Heavy tie wire -- ZIP TIES SENT
4 tubes silicone calk
chain

SORTED LIST OF ABOVE PARTS AND PIPE

	per list	add extra
1/2 OD Poly Injection line from H2O Quality Box	100'	
12" Flange Adapter with 8" FIP	1	
12" Flange Adapter x 8" Flange Adapt	4	
12" Flange bolt kit w/ gasket	6	
2" Cam loc Hose (short, into the oil storage totes)	1	
2" MIP x Male Cam loc adapter	1	
2" PVC	60'	
2" PVC 90	6	
2" PVC FIP x SLIP	4	
2" PVC TEE	2	
4" 90 Elb (on weir tank fill line)	1	
4" 90 Elb Cam (Fem x Male)	10	
4" Adapt F/Cam x 6" M/Bauer	1	

4" Adapt F/Cam x 6" M/Bauer	2
4" Adapt M/Cam x 6" F/Bauer	2
4" Butterfly valve	4
4" Butterfly valve Cam (FxM)	6
4" Butterfly Valve Gear Operated (for flow control)	1
4" Butterfly valve w/ 4" F/Cam inlet x Flange outlet	1
4" Fem Cam x 6" Vic Adapter	1
4" Flange and bolt kit w/ gasket	9
4" Flange bolt kit w/ long bolts (no gasket)	8
4" Flange x F/Cam	4
4" Flange x F/Cam (on bag filter inlet)	2
4" Flange x M/Cam (on bag filter outlet)	2
4" FLOW METER w/ Male and Fem Cam loc	2
4" Flow sensor and Injection Point	1
4" M/Cam x MIP Adapt	1
4" MIP x F/Cam (Weir tank on tank fill line)	1
4" PVC	240'
4" PVC 45	3
4" PVC 90	12
4" PVC 90 Sch 80	4
4" PVC Coupling Sch 80	6
4" PVC FIP X SLIP ADAPTER (one or the other here)	1
4" PVC MIP X SLIP ADAPTER	1
4" PVC SCH 80	105
4" PVC Sch 80 Slip x FIP Adapt	1
4" PVC TEE	5
4" PVC TEE Sch 80	2
4" TEE Adapt (FxFxM)	2
4" TEE Cam (FxFxM)	10
4" TEE Cam (FxMx3/4" Ball Valve-Test Port)	1
4" TEE Cam (FxMxM)	10
4" Vanstone	8
4" x 10' Cam Hose	53
4" x 20' Cam Hose	11
4" x 90 Elb cam (Fem x Male)	1
6" x 4" Red (FIP x F/Cam)	2
6" Bauer 45	4
6" bauer 90	6
6" Bauer Flowmeter	1
6" Bauer Tee FxMxM (Discharge Diffuser Tee)	1
6" Butterfly Valve Gear Operated Bauer in and out	1
6" Fem Bauer x Flange Adapter	1
6" Flange Bolt Kit w/ gasket	9
6" FLANGE x 4" M/Cam	1
6" PVC	40
6" PVC 90	3
6" PVC TEE	2

6" Vanstone	7
6" Vic 45 Bend	4
6" Vic 90 Bend	4
6" Vic Couplers	44
6" Vic Flow Meter	1
6" Vic x 4" Male Cam loc Adapter	1
6" x 10' Bauer Hose	12
6" x 20' Bauer Pipe	25
6" x 30' Alumn Vic Pipe	34
6" x 4" PVC Bushing	9
8" Flange bolt kit w/ gasket	4
8" Flange x 6" Flange	1
8" MIP x SLIP Adapter	3
8" PVC	75'
8" PVC 90	6
8" PVC TEE (flow diffuser)	5
8" Vanstone	4
90 Elb Cam (FxM)	8
Alumn Door Cover w/ 12" flange in and out	4
Extension cord from flow switch to LMI in H2O Quality Box	100'
PVC 721 GLUE (Qt.)	6
PVC PRIMER (Qt.)	3
RECTOR SEAL (quarts)	1